# **GUIDE FOR THE INSTALLATION OF C18 COMPILER IN MPLAB IDE**

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#### 1. How to install C18 compiler

-Previously, you should have already installed MPLAB IDE software in your PC. If you have not done so, please refer to the following guide:

http://puntoflotante.net/MPLAB-IDE-INSTALLATION-GUIDE.pdf

#### - Please download C18 installation files directly from Microchip's site:

http://www.microchip.com/stellent/idcplg?ldcService=SS\_GET\_PAGE&nodeld=1406&dDocName=en010014

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← → & http://www.microc	hip.com/st 🔎 🕆 🖒 🐼 MPLAB C Compiler for PIC 🗴			<b>↑</b> ★ ₩		
<u>A</u> rchivo <u>E</u> dición <u>V</u> er <u>F</u> avorito	s <u>H</u> erramientas A <u>y</u> uda					
	The Standard-Eval Version is free! It has all the features of the full compiler and libraries. After 60 days, the optimizations related to procedural abstraction and to the extended instruction set of the newer PIC18XXXX devices will be disabled. Code compiled after the expiration date will function but may occupy more memory space. Special free versions for <u>academic use are available here</u> . Instructions for installing and updating the MPLAB C Compiler for PIC18 MCUs are <u>available here</u> . Note that this product was previously referred to as <i>MPLAB C18</i> . Previous upgrades may be available on <u>the archive page</u> .					
	Downloads					
	🖉 You have signed in as juan martinez.					
	Title	Date Published	Size	D/L		
	MPASM™/MPLINK™ PICmicro® Quick Chart	3/30/2005 11:06:00 AM	81 KB	×.		
	MPASM/MPLINK User's Guide	3/6/2013 10:26:42 AM	3219 KB			
	MPLAB C for PIC18 v3.46 in LITE mode	5/3/2013 9:07:00 AM	85424 KB	□. ~		
<ul> <li></li> </ul>				->		

Once in Microchip's site, choose to download this file: *MPLAB C for PIC18 v3.46 in LITE mode*. And the name of the downloaded file is:

"mplabc18\_v3.46\_windows\_lite.exe".

-Execute file. Click to accept licence agreement. Next.

🗣 Setup	
License Agreement	
Please read the following Li agreement before continuir	cense Agreement. You must accept the terms of this ng with the installation.
IMPORTANT YOU MUST ACCEPT THE TH TO RECEIVE A LICENSE TERMS OF THIS LICENSE PROCEED WITH THE DOWN LICENSE TERMS, CLICK PACKAGE, DOWNLOAD, OR	ERMS AND CONDITIONS OF THIS LICENSE AGREEMENT FOR THE ACCOMPANYING SOFTWARE. TO ACCEPT THE , CLICK "I ACCEPT" OR OPEN THIS PACKAGE AND LOAD OR INSTALL. IF YOU DO NOT ACCEPT THESE "I DO NOT ACCEPT," OR DO NOT OPEN THIS INSTALL THIS SOFTWARE.
Do you accept this license? BitRock Installer	<ul> <li>I accept the agreement</li> <li>I do not accept the agreement</li> </ul>
	< Back Next > Cancel

-this window shows the path where the compiler will be installed.

Setup	
Installation Directory	
Please specify the directory where MPLAB C for PIC18 MCUs will be insta	illed.
Installation Directory C:\Program Files (x86)\Microchip\ 🔂	
BitRock Installer < Back Next >	Cancel

C18 compiler installation guide. Punto Flotante, S.A. 2013

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Setup	
Installing	5
Please wait while Setup installs MPLAB C for PIC18 MCUs on your com	puter.
Installing	
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BitRock Installer	
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-Continue installation. When the last window appears, click "Finish".

- The installation program generates 4 applications: mcc18.exe (compiler), mplink.exe (linker), mplib.exe (library management) and MPASMWIN.EXE (assembler). These 4 applications must be included by the user in any C18 project, following the instructions given right away.

# 2. How to download a C18 template folder for Bolt 18F2550 system

- Download the .zip file with the template files and libraries for 18F2550 Bolt system from the following link:

http://puntoflotante.net/BOLT-18F2550-PROGRAMS/C18-BOLT-TEMPLATE-AND-LIBRARIES.zip

X **Bolt 18F2550 C18 template and libraries** + 4+ Buscar C18... 🔎 Archivo Edición Ver Herramientas Ayuda Incluir en biblioteca 💌 Compartir con 💌 RR -Organizar 💌 >> ? LCD, KEYPAD, DELAYS, EEPROM LIBRARIES 18F2550BOLT ADC-BOLT A/D CONVERTER LIBRARY BOLT-C18-TEMPLATE C18 BOLT 18F2550 TEMPLATE rm18f2550 C18 LINKER SCRIPT SERIAL-PORT-BOLT 6 elementos all included in support CD

-Extract the files and you will have a project folder looking like this:

This a C18 project folder for the Bolt 18F2550 system. It includes a template source file (.c), several libraries for Bolt system (.h) and the linker script (.lkr).

By using this folder as a template for your C18 projects, you guarantee that the compiler will operate without errors and that within MPLAB IDE software, you will be able to load the executable files in the Bolt 18F2550 board.

Now go to next step and create a C18 project in MPLAB.

## 3. How to create a C18 project in MPLAB

Open MPLAB IDE and select option "Project wizard". Select microcontroller 18F2550

ject Wizard		х
Step One: Select a device		<b>1</b>
	De <u>v</u> ice: PIC18F2550	
	< Atrás Siguiente > Cancelar Avuda	

#### \*\*\*THIS IS A VERY IMPORTANT STEP\*\*\*

In the next step (Step Two), select "Microchip C18 Toolsuite" and assign one by one, the four applications with their corresponding path using the "Browse" button.

The paths where the 4 applications are located are:

C:\Program Files (x86)\Microchip\mplabc18\v3.40\bin (for mcc18.exe, mplink.exe and mplib.exe)

C:\Program Files (x86)\Microchip\mplabc18\v3.40\MPASM (for MPASMWIN.EXE)

Step Two: Select a langua	age toolsuite
Active Toolsuite: Toolsuite Content	Microchip C18 Toolsuite
MPASM Asse MPLINK Obje MPLAB C181 MOUD 13	embler (mpasmwin.exe) v5.42 ect Linker (mplink.exe) v4.40 C Compiler (mcc18.exe) v3.40
<sup>D</sup> rogram Files (x88	6)\Microchip\mplabc18\v3.40\mpasm\MPASMWIN.exe Browse ations in project
Help! My S	uite Isn't Listed!

In step 3 (Step Three), use "Browse" to locate the template folder where your files of C18 project are stored. Remember that you have already this folder available.

Project Wizard	×
Step Three: Create a new project, or reconfigure the active project?	₿ <sub>¢</sub>
Create New Project File	
	Browse
• • • • • • • • •	
C Reconfigure Active Project	
C Make changes without saving	
C Save changes to existing project file	
C Save changes to another project file	
	Browse,
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Once in the Project folder, just type the first letter of the name of source file. Choose that name ("BOLT-C18-TEMPLATE") and erase the last two characters, ie ".c", so that the name of project is the same as the name of the source file. Click "Save".

<b>**</b>	Save Pro	oject As		×
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Jump to:	C:\MICROCHIP\ccp_pwm\		~	

#### Click on "Next":

Project Wizard
Step Three: Create a new project, or reconfigure the active project?
Create New Project File
C:\Users\JBM\Desktop\C18-BOLT-TEMPLATE-AND-LIBRARIES\ Browse
Reconfigure Active Project
Make changes without saving
Save changes to existing project file
Save changes to another project file
Browse
Cancelar Aunda
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In the next window (Step four) select the files of your project in the left window and then the "Add" option to pass them to the right window. In this case you will have in your project: the template source file (.c), a library file (.h) and the linker script (.lkr). Click "Next".

Project Wizard	×
Step Four: Add existing files to your project	₿ <sub>₽</sub> ₩
ktop         Bolt-v-Lite-5-test-programs         BOOT-0X/900-K-SOURCE-CODE-1         C:\Users\JBM         C:\Users\JBM         C:\Users\JBM         C:\Users\JBM         C:\Users\JBM         C:\Users\JBM         Bolt-rempLate-AND-LIBR/         Bolt-clastemPLate.c         ONEWIRE-BOLT.h         Bolt-clastemPLATE.c         ONEWIRE-BOLT.h         Bolt-clastemPLATE.c         ONEWIRE-BOLT.h         Bolt-2550.lkr         SERIAL-PORT-BOLT.h         FRANS-SCHREUDER-BOLT-SOF: *	I\Desktop\C18-BOL I\Desktop\C18-BOL I\Desktop\C18-BOL
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# Click on "Finish" to end

Project Wizard		X		
33	Summary			
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600	Project Pa	rameters		
Tory	Device:	PIC18F2550		
· 8 10 0	Toolsuite:	Microchip C18 Toolsuite		
	File:	C:\SISTEMA-BOLT\ARCHIVOS SISTEMA BOLT\ARCHIVOS-C18\C18-PROYECTO-1\C1		
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# 4. How to write a program and compile

This is the window you will see in MPLAB, after finishing the creation of C18 project:



Edit the source file .c before compiling, adding the following lines to the main function, as shown. This program will flash led B0 every 500 ms in your Bolt 18F2550 system.

\_ 🗆 🗙 BOLT-C18-TEMPLATE - MPLAB IDE v8.89 <u>File Edit View Project Debugger Programmer Tools Configure Window Help</u> 🗅 🚅 🖬 🕺 🐂 🛍 🎒 🖊 🌽 🚚 🌹 Debug 🗸 💣 🚘 🔜 🧠 🖬 🚯 🖻 🚯 Checksum: 0x8491 C:\Users\JBM\Desktop\C18-BOLT-TEMPLATE-AND-LIBRARIES\BOLT-C18-TEMPLATE.c\* 21 #pragma code ~ 22 23 void main() 24 //initialize ports 25 init bolt(); 26 loop: 27 RB0=1; 28 //flash led B0. delay ms(500); 29 RB0=0;30 delay ms(500); 31 goto loop; 32 3 PIC18F2550 W:0 n ov z dc c bank Ln 25, Col 43 IN V

Then choose options "Project" and "Built all" to compile. The window below shows a succesful compilation:



Your MPLAB window will look like this:

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Go to the your original project folder, and observe, among many others, the executable file (.hex) created by the compiler and ready to be loaded in the system Bolt 18F2550:

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	✓ <	1				>
12 elementos 1 e	elemento selecc	ionado 4.23 KB				

Load this file to your Bolt 18F2550 system using software Bolt v.1.0.1. If you haven't done so before, use this guide:

http://puntoflotante.net/BOLT-18F2550-SYSTEM-PROGRAMMING-MANUAL.pdf

This program will flash led B0 every 500 ms in your Bolt 18F2550 system!

Should you have any questions please contact:

atencionaclientes@puntoflotante.net